



MARINE BIOLOGY

OCB 4043-001 (10245)(2 credits) Fall 2020



Pre-requisite: BSC 1010, BSC 1010L, BSC 1011, BSC 1011L,
And ZOO 2203, ZOO 2003L or PCB 4043

Corequisite: Marine Biology Lab, OCB 4043L (request to unlink:
<https://cescos.wufoo.com/forms/r1jqgy9m1jbcqdk/>)
Biology Elective

T & TH, 2 – 2:50pm, General Classroom South, Rm 109

INSTRUCTOR: Dr. W. Randy Brooks

E-MAIL ADDRESS: wbrooks@fau.edu

OFFICE HOURS: Tues/Thurs 9:45 – 11:30am; Biological (Sanson) Science, Rm 268

COURSE CONTENT: Discussion of major concepts of marine science

Quickest Trip to a Bachelor's Degree

GENERAL ADVISING TIPS & STRATEGIES

For complete information, please visit the [Biology Advising Website](http://biology.fau.edu/academics/quickestriptoabachelorsdegree.php) at
<http://biology.fau.edu/academics/quickestriptoabachelorsdegree.php>

Don't waste your time and money! Use the below 4 tips to get and stay on track for a timely graduation!!!!

Step 1) Learn how to navigate the "MY FAU" web portal. Familiarize yourself with features available through "FAU Self-Service" located within the "Home" tab as well as the features available in the "Students", "Money Matters!" and "Success Network" tabs (<https://myfau.fau.edu/cp/home/displaylogin>)

Step 2) Use the flight plans available on the FAU website to build your own academic plan. The flight plans are suggested four-year course schedules leading to completion of the Biology B.A. or the Biology B.S. (blueprints for graduation within four years!). For Biology majors who wish to apply to a medical or professional program upon graduation, a suggested Pre-Health version of the Biology B.S. flight plan is also available (<http://biology.fau.edu/academics/quickestriptoabachelorsdegree.php>) .

Step 3) Use the "Departmental Schedule" (not the "Searchable Schedule") to see all courses available (by department) within a given semester when working to schedule your classes (https://banner.fau.edu/FAUPdad/lwskdsch.p_dept_schd)

Step 4) Use the Degree Audit Reporting System (DARS) to keep track of which requirements you still need to fulfill in order to graduate. When running your degree audit, you may audit your progress against the catalog year in which you first entered FAU (provided that you have maintained continuous enrollment) OR the current catalog year. You may also select alternate degree options to see if you are closer to completing one degree than another (e.g. compare the Biology B.S. with the Biology B.A.) (<https://www.fau.edu/registrar/graduation/degree-audit.php>)

***Please note the below [excess credit hour policy](#). It is your responsibility to work with your academic advisor to minimize additional costs to you associated with the completion of excess credits.

Credit Hour Policy: Excess Hours Surcharge

Florida Statute 1009.286 defines "excess hours" as credit hours that exceed the completion requirements for a baccalaureate degree program at state universities. For students enrolling in a state university or a Florida State College System institution for the first time in or after the fall 2009 semester, a tuition rate surcharge will be applied for excess hours. The surcharge is assessed only on the tuition portion of the semester hour cost, not on the fees. The amount of the surcharge and the allowable "excess hours" are determined by the initial term of entry as indicated in the catalog. For the complete Policy see <http://www.fau.edu/academic/registrar/FAUcatalog/academics.php#excess>.

Course Description

Discussions of the major concepts of modern marine biology with emphasis on life in subtropical and tropical seas.

Course Objectives

Upon completing the course, you will have an understanding and appreciation of the following overlying themes in Marine Biology and Marine Science.

Biotic, the diversity and richness of marine fauna and flora

Abiotic, the physical aspects of the marine biota, including discussions on oceanography, chemistry, geology, meteorology, physics and chemistry

Educational Learning Objectives

- 1) Read and comprehend scientific writing
- 2) Understand and apply scientific concepts
- 3) Interpret scientific graphs and figures
- 4) Understand the role of biological aspects of marine science
- 5) Understand the role of physical aspects of marine science

***** **Canvas:**

I will be using Canvas, an online program for managing communication and grade information.

Please go to the following website: <https://canvas.fau.edu/>

University Attendance Policy: Students are expected to **attend all** of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence (University Catalogue, 2019-2020).

Attendance on First Day of Class: "Students are required to attend the first day of class for any course in which they are registered. If a student misses the first day of class for any reason, the student may be administratively withdrawn from the course." (University Catalogue, 2019-2020).

Marine Biology Attendance Policy: Students **ARE REQUIRED TO ATTEND PUNCTUALLY EACH LECTURE**. Unannounced quizzes will be given throughout the term,

classes. **ONLY THOSE WHO FOLLOW THE PRECISE PROCEDURES WILL BE ALLOWED TO DO QUIZ/MAKEUPS** (Please see Make-up Exam/Quiz Policy, P. 3). If you know in advance that you will have to leave class early before all quizzes are given, please give me a written note BEFORE CLASS BEGINS explaining your justification for having to leave class early. The note should be placed inside a SEALED ENVELOP with your NAME & Z-NUMBER on the outside (no need for discussion/explanations at the podium, as your note should be self-explanatory). I will then need written documentation (either emailed or delivered during my office hours the next day our class meets – not weeks later) from a professional to verify and potentially excuse the absence. If possible, please sit near the back of the “allowed rows” and near an aisle to minimize distractions when you have to leave early.

Invertebrate Zoology Prerequisite Policy: To study marine science, among other topics, a strong foundation in animal taxonomy is required. While most biology students (through classes and perhaps life experiences) will inherently be familiar with vertebrates, most marine animals are invertebrates - thus, the reason for requiring an **Invertebrate Zoology** course (Lecture & Lab). However, I have allowed “some” students to take this course (lecture and/or lab) without this prerequisite. To ensure that all students are at least minimally prepared with such background knowledge, **I am requiring the following work be completed and emailed to me (wbrooks@fau.edu) by 1pm on Friday, August 24th** (this date is the last date to drop the course without the liability of fee payment for the course):

- 1) Read the following Chapters in the textbook **Introduction to Marine Biology** by Karleskint et al., 2013 (4th edition)(You must use this edition):
 - A. Chapter 8: Lower Invertebrates
 - B. Chapter 9: Higher Invertebrates
- 2) Do all of the **Multiple Choice, Matching, Short Answer and Thinking Critically** questions on the following pages:
 - A. Chapter 8: pp. 212-213
 - B. Chapter 9: pp. 254-255

Note: 1-2 paragraphs each will suffice for the Short Answer and Thinking Critically section. For the multiples choice questions, just type the question number followed by the choice (e.g., 1. = b). Your work is to be done independently – no group effort!

To validate that students have taken **Invertebrate Zoology**, I will require the 1st day of class a hard copy of your transcript/course schedule highlighting (with a colored marker) that this course has been completed with a minimum grade of C-. Those students taking **Invertebrate Zoology** concurrently are also required to complete the assignment. Without such validation, all students will be required to complete the assignment above. **You must complete the assignment by the due date and time; otherwise, you will be withdrawn from the class automatically.**

I-Clicker: Each student will be required to purchase and register (see instructions below) an I-Clicker Remote (any model) and must bring it to class EACH lecture. The I-Clicker remote will be used for: 1) **Regular Quizzes (5 quizzes worth 5 points each; 25 total points)** and 2) **Diagnostic Quizzes** (which do not count against your grade, but are worth extra credit points).

I-Clicker Registration: I require that ALL students register their device via Canvas.

Remember, you must have your device registered to this class. It is also your responsibility to bring your Device EACH CLASS PERIOD and to keep it functional (Hint: do not leave it in your car; it gets really hot in S. Florida; also, make sure the batteries are in good shape; the device will flash a red light when you have less than 10 hours of charge left).

“No I-Clicker – No Quiz!”

You can, however, sign in manually for attendance!!!

Code of Academic Integrity Policy Statement: *Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001. https://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf*

Electronic Devices & Student Honor Code: **Cell/Smart phones must be Turned Off and Stored Completely Out of View at All Times** (no cell phones in external holders/belt straps, too). Any student with a cell phone or any other non-approved electronic device (such as smart watches, smart bands) in view during an exam/quiz will be considered cheating just as they would be for talking, looking at other's exams, etc. Students May Only Have One I-Clicker With Them in Class at All Times. Any students observed with 2 or more I-Clickers will be considered to be cheating, regardless of whether there was a quiz and/or attendance taken. All instances of cheating will be pursued fully, including an automatic F in the course and notation on the student's University record (see Honor Code, 6c5-4.01). **Laptops/tablets can be used for notetaking purposes only – no websurfing, social networking, etc. (abuse of this may result in my banning such devices for the whole class)**

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BOOKS: Lecture - Karleskint, G. et al., 2013. Introduction to Marine Biology
Marine Biology, QuickStudy
Lecture Notes (available in class for \$5)

I-CLICKER: Models: Original, Plus or 2; Available at FAU Bookstore & Internet (& Booksmart?)

LECTURE PPT: PowerPoint lectures for each of the 3 Units will be available in Canvas

LECTURE & READING ASSIGNMENTS*:

Unit I	Chapter	Week
Science and Marine Biology	1	1: Aug 22, 24
Geology of the Oceans	3	2: Aug 27, 29
“ “ “ “	“	3: Sept 3, 5
Water, Waves, and Tides	4	4: Sept 10, 12
“ “ “ “	“	5: Sept 17, 19
		6: Sept 24, 26

Unit I Exam Date (SEPTEMBER 26th, tentatively)

Unit II		
Biological Concepts	5	7: Oct 1, 3
Marine Microbes	6	
Multicellular Primary Producers	7	8: Oct 8, 10
“ “ “ “	“	9: Oct 15, 17
Intertidal Communities	13	10: Oct 22, 24
The Open Sea	17	

Unit III

Life in the Ocean's Depths	18
Estuaries	14
Continental Shelves and Neritic Zone	16
Coral Reef Communities	15

12: Nov 5, 7

13: Nov 12, 14

14: Nov 19, 21

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15: Nov 26, 28 Thanksgiving Holiday

FAU READING DAYS - NO CLASSES

16: Dec 2-4

Unit III Exam & Optional Comprehensive Final Date

Tues, Dec 10th, 1:15 – 3:45 pm

* There will be a "lot" of supplemental readings and videos, which will also be covered on exams

LECTURE GRADING: 1st Exam = 50 pts; 2nd Exam = 100 pts; 3rd Exam = 125 pts; *Optional Comprehensive Final = 125 pts
Five Quizzes – 5 points each

Lecture exams (3)	275 points
Quizzes (5)	25 points
	<hr/> 300 points total

GRADING SCALES

Without Comprehensive Final	With Comprehensive Final (*Decision to take by Tuesday, Nov. 26 th)
270-300 = A	382-425 = A
261-269 = B+	369-381 = B+
249-260 = B	349-368 = B
240-248 = B-	340-348 = B-
231-239 = C+	327-339 = C+
219-230 = C	306-326 = C
210-218 = C-	297-305 = C-
201-209 = D+	289-296 = D+
189-200 = D	263-288 = D
180-188 = D-	255-262 = D-
0-179 = F	0-254 = F

Make-up Exam/Quiz Policy: A make-up exam/quiz will be given only if the student can provide a **WRITTEN, VERIFIABLE EXCUSE FOR THEIR ABSENCE FROM AN EXAM/QUIZ**. There are no exceptions to this policy; so please don't ask! If you are ill or have some other valid reason for missing an exam/quiz, **YOU MUST NOTIFY ME EITHER BEFORE OR WITHIN FOUR HOURS OF THE TEST TIME**. You may contact me either at 297-3888 (I have voice mail) or by contacting the Biology Office at 297-3320 and leaving a message for me. (E-mail alone **CANNOT** be used for notification of missed exams). This verbal notification **DOES NOT, HOWEVER, EXCUSE YOUR ABSENCE**; it simply informs us that you are absent and will bring a **WRITTEN, VERIFIABLE EXCUSE** (with telephone # for verbal verification) from a **PROFESSIONAL** upon your return to school. Written verification will not be accepted beyond the first class period back (i.e., you must turn it in the very next class period you attend – not weeks/months later). Again, you must notify me right away (within 4 hours) about your absence – not days later, even if there is a medical situation (unless circumstances absolutely preclude immediate notification – which I will need to verify as well). So, again, if you miss a class in which there was a quiz or exam, and you wait until our next class meeting, your absence **WILL BE UNEXCUSED**.

If a person misses either Unit I or II exams, and follows the protocol outlined above, they will be allowed to make up such exams **ONLY DURING THE FINAL EXAM CLASS PERIOD, AFTER THEY COMPLETE EXAM THREE**. The make-up exam will be a comprehensive essay exam covering topics from the entire course. However, the point value of this exam will be equal to whichever exam was missed (either 50 or 100 points).

If a person misses any quizzes, and follows the protocol outlined above, they will be allowed to make up such quizzes **ONLY** during the final exam period after they take exam three. The make-up quizzes will be comprehensive in nature covering topics from the entire course.

Makeup quizzes will not be available for those who simply forgot their I-Clicker, or whose battery was drained/dead in the device.

Students who come to class **late by 20 minutes or more on a Unit Exam** day will not be allowed to take the exam that same day. A makeup exam (see paragraph 2 above) **MAY** be available if verification is provided to excuse the tardiness. If you will be absent on an exam day because of a holiday not observed by the University, you must notify me in advance to make arrangements to make up work immediately upon your return to school. Students who miss the final exam with an excuse, and who are passing at the time, will receive an incomplete and have to take the comprehensive essay exam after the term is over. Any student wishing to take the 3rd exam early must also take the comprehensive essay exam.

Religious Accommodations:

Students who wish to be excused from coursework, class activities or examinations must notify the instructor in advance of their intention to participate in religious observation and request an excused absence.

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/. For those needing extra time accommodations, please make sure your course schedule will not create conflicts, as I require that "all" students start exams at the same time (for exam content security purposes). This can be accomplished by avoiding back-back classes (i.e., schedule classes at least several hours apart), as I would advise "all" students to ensure academic success.

I also require SAS students meet with me in my office to discuss accommodations (rather than online).

"Counseling and Psychological Services (CAPS) Center Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling>"